

## Cal/Ecotox

Exposure Factors for Ensatina (*Ensatina eschscholtzii*)\*

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Endpoint Type	Endpoint Value	Error	Range	Units	Sex	Life Stage	Location	Note	Reference
Age at Sexual Maturity			3 - 4	yrs	B	Adult	Contra Costa; CA	a	1
Body Weight - Mean	6		5 - 7	g	B	Adult	Contra Costa; CA	b	1
Body Weight - Mean	4.30		2.58 - 5.08	g	F	Adult	OR	c	2
Body Weight - Mean	2.80		1.45 - 5.80	g	M	Adult	OR	d	2
Body Weight - Mean	1.60		0.70 - 3.28	g	B	Juvenile	OR	e	2
Body Weight - Mean	0.26		0.05 - 0.49	g	NR	Juvenile	OR	f	2
Clutch or Litter Size	11		8 - 17	#/clutch	F	Adult	Contra Costa; CA	g	1
Clutches or Litters per year	1			clutch/yr	F	Adult	Contra Costa; CA	h	1
Dietary Composition	sow bugs (42%); centipedes (42%); spiders (60%); springtails (47%); beetles (36%); caterpillars (5%); ants (13%)			%	B	Both Adult and Juv.	Los Angeles; CA	i	3
Dietary Composition	Crustacea (1); Arachnida (19); Diplopoda (5); Chilopoda (3); Hexapoda (32)			B		Both Adult and Juv.	OR	j	2
Dietary Composition	Collembola (68%); Coleoptera adults (49%); Coleoptera larvae (11%); Diptera adults (14%); Diptera larvae (16%); Hymenoptera (22%); Acarina (19%); Araneae (57%); Diplopoda (38%); Isopoda (32%)			%	NR	Both Adult and Juv.	Humboldt; CA	k	4
Dietary Composition	earthworm (1); sowbugs (14); amphipod (1); centipede (1); millipede (4); spiders (6); springtail (1); thysanuran (1); camel crickets (15); lepidopterous larva (1); dipteran (1); beetles (5); ant (1)			#	NR	Both Adult and Juv.	Contra Costa; CA	l	1
Dietary Composition	sowbug (1); centipede (1); millipede (6); spiders (7); wood ticks (2); scavenger mite (1); solpugid (1); springtails (5); worker termites (15); hemipteran (1); fly (1); beetles (11); ants (2)			#	NR	Both Adult and Juv.	Los Angeles; CA	m	1
Dietary Composition	gastropoda (1.5%); annelida (1.5%); acarina (10.0%); araneida (17.7%); non-insect arthropods (16.9%); collembola (16.2%); hemiptera (8.5%); coleoptera (3.1%); lepidoptera (0.8%); hymenoptera (12.3%); diptera (10.0%); orthoptera (1.5%)			%	NR	NR	OR	n	5
Dietary Composition	acarina (32.5%); araneida (22.6%); non-insect arthropods (22.6%); collembola (16.1%); coleoptera (6.5%)			%	NR	NR	OR	o	5
Duration of Incubation or Gestation			4 - 5	mo	F	Adult	Contra Costa; CA	p	1

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Endpoint Type	Endpoint Value	Error	Range	Units	Sex	Life Stage	Location	Note	Reference
Growth Rate	0.092	0.0071		mm/d	F	Adult	Calaveras; CA	q	6
Growth Rate	0.005	0.0049		mm/d	M	Adult	Calaveras; CA	r	6
Growth Rate	see citation				B	Juvenile	Contra Costa; CA	s	1
Home Range	22.2	2.8	0 - 60	m	F	Adult	Calaveras; CA	t	6
Home Range	17.3		2.5 - 63.7	ft	F	Adult	Contra Costa; CA	u	1
Home Range	21.7	2.1	0 - 120.4	m	M	Adult	Calaveras; CA	v	6
Home Range	32.8		5.2 - 106.6	ft	M	Adult	Contra Costa; CA	w	1
Home Range			10 - 86.3	m	NR	Juvenile	Calaveras; CA	x	6
Longevity			6 - 8	years	B	Adult	Contra Costa; CA	y	1
Metabolic Rate	194.1	14.3 SE		ul O <sub>2</sub> /g/hr	NR	NR	Lab	z	7
Population Density			170 - 200	#/acre	B	Adult	Contra Costa; CA	aa	1
Population Density			600 - 700	#/acre	B	Both Adult and Juv.	Contra Costa; CA	ab	1
Time of Hatching or Parturition	fall - early winter				NR	Embryo	Contra Costa; CA	ac	1
Time of Mating/ Laying	Oct. - Mar.				B	Adult	Contra Costa; CA	ad	1
Time of Mating/ Laying	late spring - early summer				F	Adult	Contra Costa; CA	ae	1

### Notes

- a N=NR; Pinehurst Madrone Grove Park
- b N=9; Pinehurst Madrone Grove Park
- c N=11; Portland, Multnomah County; > 85.0 mm total length
- d N=19; Portland, Multnomah County; > 85.0 mm total length
- e N=37; Portland, Multnomah County; 52.0 - 85.0 mm total length
- f N=23; Portland, Multnomah County; < 40.5 mm total length
- g # large ovarian eggs/female; N=26; Pinehurst Madrone Grove Park
- h N=NR; yr-round; Pinehurst Madrone Grove Park
- i % of stomach containing food item; N=45; winter and spring; Dixie Canyon; *Ensatina* snout-vent length range = 23-63 mm
- j number of each item in stomach contents; N=21; Portland, Multnomah County
- k % frequency of major food items; N=37; March - April; 1-2 mi WSW of Pepperwood, Humboldt Co.
- l number of each food item in stomachs; N=27; Pinehurst Madrone Grove Park
- m number of each food item in stomachs; N=8; Madelia Canyon
- n % of total items in stomach contents; *Ensatina* size class >45 mm; N=<22; Oct.; Multnomah County
- o % of total items in stomach contents; *Ensatina* size class <45 mm; N=<22; Oct.; Multnomah County
- p N=NR; Pinehurst Madrone Grove Park
- q change in snout-vent length measured between recaptures (>1000d); N=NR; Calaveras Big Trees State Park (elev., 1400m)
- r changes in snout-vent length measured between recaptures (>1000d); N=NR; Calaveras Big Trees State Park (elev., 1400m)
- s figure of growth rates based on changes in snout-vent length; N=NR; yr-round; Pinehurst Madrone Grove Park
- t mean final distance from original site of capture; N=NR; Calaveras Big Trees State Park (elev., 1400m)
- u average distance moved between recaptures; N=13; yr-round; Pinehurst Madrone Grove Park
- v mean final distance from original site of capture; N=NR; Calaveras Big Trees State Park (elev., 1400m)
- w average distance moved between recaptures; N=17; yr-round; Pinehurst Madrone Grove Park
- x range of distances moved from original site of capture; N=7; Calaveras Big Trees State Park (elev., 1400m)
- y range of oldest individuals recorded; N=3; Pinehurst Madrone Grove Park
- z mean oxygen consumption following activity, measured at 25C; N=5; average body weight, 2.35 g
- aa estimated maximum density; N=25; yr-round; Pinehurst Madrone Grove Park
- ab estimated maximum density; N=NR; yr-round; Pinehurst Madrone Grove Park
- ac N=NR; Pinehurst Madrone Grove Park
- ad time of breeding; N=NR; Pinehurst Madrone Grove Park

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ae time of laying; N=NR; Pinehurst Madrone Grove Park

#### References

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- 6 Staub, N.L., C.W. Brown and D.B. Wake. 1995. Patterns of growth and movements in a population of *Ensatina eschscholtzii platenensis* (caudata: plethodontidae) in the Sierra Nevada, California. J. Herpetol. 29(4):593-599.
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